

REMARKS

The Office Action dated March 11, 2005 has been received and carefully reviewed. The preceding amendments and the following remarks form a full and complete response thereto. Claims 1-3 and 7-8 are amended. Claim 4 was cancelled without prejudice or disclaimer. Claims 11-14 have been added. No new matter has been added. Support for the new claims can be found, *inter alia*, in Fig. 2 and at pages 5-6 of the specification, and in the original claims. Accordingly, claims 1-3 and 5-14 are pending in the application and submitted for reconsideration.

The drawings were objected to under 37 CFR 1.83(a) on the grounds that the drawings allegedly do not show each and every feature of the claims. In particular, it was asserted in the Office Action that the "bottom line of the fluke" as set forth in claims 7 and 8 is not shown in the drawing features. The Applicant traverses the objection.

The bottom line of the fluke is clearly shown in Fig. 2 and described on pages 5 and 6 of the Specification. However, the bottom line was not labeled with a reference numeral in Fig. 2. Accordingly, a replacement Fig. 2 is submitted herewith which adds the reference number 38 to identify the bottom line of the fluke. Accordingly, Applicant requests that the objection be withdrawn.

An objection was made to the Specification for failing to include section headings. Section headings have been added by this amendment. Accordingly, the Applicant requests that the objection be withdrawn.

An objection was also made to the Specification for the use of the term "BÜGEL" without an attendant trademark symbol or without being capitalized. The word "bügel"

is a German word used to describe the round part located at the back part of the fluke. As this anchor is originated from Germany, this typical design is known as "bügel," and the term is generic. The Applicant submits that the Applicant is unaware of any trademark nor a registered brand name for bügel. Therefore, the Applicant submits that this term needs no trademark label or capitalization. Accordingly, the Applicant requests that the objection be withdrawn.

An objection to the Specification was also made for a number of informalities, mostly misspellings. The Applicant made appropriate amendments to the Specification in order to correct the informalities. Accordingly, the Applicant requests that the objection be withdrawn.

Claims 1, 3, 7 and 8 were objected to because of a number of informalities. In particular, the word fluke was misspelled, the word "center" was misspelled, and the word "from" was also misspelled. Amendments to the claims have been made in order to correct the informalities. Accordingly, the Applicant requests that the objections be withdrawn.

Claims 2, 7 and 8 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the invention. In particular, the Examiner objected to the use of the broad range or limitation together with a narrow range that falls within the broad range or limitation. Claims 2 and 7-8 have been amended the claims to delete the objected language, and new claims were added to cover separately the different claimed ranges. The Applicant

submits that claims 2 and 7-8 comply with the requirements of 35 U.S.C. § 112 and requests that the rejection be withdrawn.

Claims 1, 5, 9 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Goodman (US 6,390,011 B1). The Applicant respectfully traverses the rejection and submits that claims 1, 5, 9 and 10 recite subject matter not disclosed by Goodman.

Claim 1 of the present invention, upon which all other claims depend, defines an asymmetric boat anchor that includes an unballasted fluke and a shank. The unballasted fluke has a tip and a back with a curved edge. The shank is mounted on the fluke, with an opening at an end opposite the fluke. An edge of the shank away from the tip of the fluke is curved, and the opening is offset from a plane tangent to the back edge of the fluke and to the edge of the shank. The shank is mounted on the half portion of the fluke near to the tip.

The claimed invention achieves numerous nonobvious advantages over the prior art based on the following two principles:

- 1) The holding of an anchor is much more related to the surface area and to the shape of the fluke, than to its total weight; and
- 2) To hold, any anchor should first penetrate the sea bottom, and the anchor penetration is related:
 - a) to the sharpness of the penetrating part (the anchor tip),
 - b) to the right penetrating angle, and also
 - c) to the part of the anchor weight distributed at the level of the anchor tip.

The present invention has a much bigger surface area per unit of weight than prior art anchors, by suppressing any kind of ballast. But as stated before, weight is very important for an efficient penetration. For this reason, the shank is fixed on the forward part of the fluke. As a result, the weight of the shank acts like a "ballast" to increase the weight distribution on the anchor tip, even though the fluke is unballasted.

None of the cited prior art discloses of the above or can achieve these two principles.

Goodman discloses an unballasted fluke having the tip in back with the curved edge and a shank mounted on the fluke with an opening at the end opposite of the fluke. The shank in Goodman is not, however, curved from the end where the shank meets the fluke all the way to the open end. Further, the shank is mounted on the back half of the fluke, away from the tip. Thus, Goodman fails to disclose each and every feature of claim 1, upon which claims 5 and 9-10 depend.

Although it is unnecessary to list the additional features of claims 5 and 9-10 which are patentable over Goodman, the Applicant points out the following:

Regarding claim 5, it was asserted in the Office Action that when the anchor in Goodman is put in a particular position with the tip of the fluke pointing down, the weight of the anchor on the tip is higher than 20%. This is a completely theoretical supposition. Anchors are launched in the water, let's say, between 6 to 12 meters deep. In the case that the anchor will fall in the bottom on the position described in the Office Action, the anchor is in a completely unstable position will continue its movement until it will be in a stable position, the penetrating or "anchoring position." However, as explained on

pages 4 and 5 in the Specification, the proportion is measured by positioning the anchor in the anchoring position (*e.g.*, resting on three points: the tip, one of the sand guides, and the distal extremity end of the shank). Further as stated on page 5 of the Specification, the proportion of the weight of an unballasted anchor of the prior art is normally around 16%. In Goodman, the shank is mounted towards the back of the fluke, and therefore, the anchor of Goodman does not have a proportion of the weight on the tip of greater than 20%, when in the anchoring position.

Regarding claim 9, as described by Goodman, "the flap gives the ability of the anchor to achieve horizontal travel as it is pulled through a mooring bottom." In contrast, the sand guides of the present invention are not located on the inferior part of the fluke, but in the superior part. The sand guides do not allow the anchor to achieve a horizontal travel (any anchor pulled on a horizontal surface will achieve an horizontal travel, fins or not fins, etc.) As about 25 to 30% of the total anchor weight is located on the anchor tip in the anchoring position, the remaining weight is distributed between the extremity of the shank and one lateral part of the fluke. The purpose of the two sand guides, as described in the present specification, with an angle similar to a "spreader", is to slide on the surface of the sea bottom and to limit the penetration of the "ears" of the fluke. This feature will increase the penetration of the tip. The purpose of the Goodman anchor fins and the sand guides of the present invention, are completely different.

With respect to claim 10, Goodman does not disclose a protruding section on the lower edge of the shank. Instead, the protruding section is on the back edge of the

shank. As stated in the Specification, the lower edge of the shank is "the edge facing the tip of anchor." See p. 4, lines 23-24.

Thus, the Applicant submits that Goodman fails to disclose each and every feature of claims 1, 5 and 9-10. Accordingly, the Applicant requests that the rejection be withdrawn and claims 1, 5 and 9-10 be allowed.

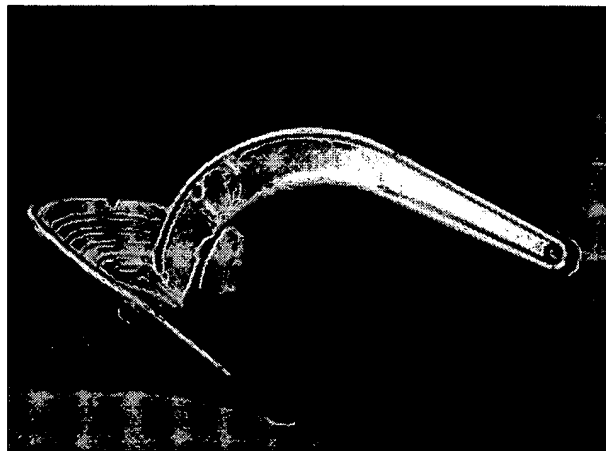
Claims 1 and 4 were rejected under the 35 U.S.C. § 103(a) as being unpatentable over FR 2820108. Applicant respectfully traverses the rejection and submits that FR 2820108 fails to disclose or suggest the features of the claims.

Claim 1 was amended to include the features of claim 4.

FR 2820108 describes an anchor with ballasted fluke. The fluke includes "a massive counterpoint 8." Whether or not the shank is detachable from the fluke is irrelevant to the issue that this invention utilizes a ballasted fluke. "Counterpoint 8 serves as ballast." See page 5 of the English translation of 2820108. "The weight of counterpoint 8 also has a tendency to generate pressure of point 6 on the seabed, which again contributes to promoting its burial." See page 6 of the English translation of 2820108. The anchor described in FR 2820108, can by no means be considered as a non ballasted anchor. Further, Applicant submits that there are no technical reasons why a ballast should be interpreted to mean that such a weight may be detachably attached to the anchor. Further, Applicant submits that old boats have been using stones as a ballast and they have been able to remove them when charging goods. Modern boats have steel or lead ballast cast into the keel, and this ballast is no longer "detachable".

Regarding the position of the shank, in FR 2820108, the position of the fixation of the shank has not been conceived to increase the weight repartition on the anchor tip. FR 2820108 fails to disclose or suggest that "the shank is mounted on the half portion of the fluke." The drawing in FR 2820108 is merely an "artistic" representation of its anchor. On its Fig. 2, the angle B described as the angle formed by a straight line joining end(3) to end (15) connected to fluke (2) and a tangent to the center line (9) of fluke (2) is between 34 and 40°. Applicants measured this angle B on the FIG 2 to be 42°. Thus, the drawings are unreliable and should not be interpreted to show the claimed feature.

The Applicant submits that the exact view of the anchor patented by FR 2820108 is:



Clearly, the shank is mounted on the back half of the fluke.

In view of the foregoing, the Applicant submits that FR 2820108 fails to disclose or suggest each and every feature of claim 1. Accordingly, the Applicant requests that the rejection be withdrawn and claim 1 be allowed.

Claims 2, 3, 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Goodman. The Applicant respectfully traverses the rejection and submits that claims 2, 3, 6 and 7 recite subject matter not disclosed or suggested by Goodman.

Claims 2-3 and 6-7 depend from claim 1 and therefore, are patentable over Goodman for at least all the reasons described above with respect to claim 1. Further, although unnecessary, the Applicant provides the following comments relating to additional features not disclosed or suggested by Goodman.

With respect to claim 2, Goodman does not disclose the ratio of the surface area of the fluke to the weight of the anchor. The Office Action took the position that it would be an obvious design choice for one skilled in the art at the time of the invention to provide the fluke with a sufficiently large surface area. The Applicant disagrees. As explained in the Background section of the present Specification, the state of the art suggests increasing the weight of the anchor and not surface area. The unsupported contention in the Office Action is improper and Official Notice was not taken. If the position taken in the Office Action respecting the state of the art is to be maintained, the Applicant requests that the Examiner document support for this assertion. Further, the Office Action fails to cite any suggestions in the reference for increasing surface area.

With respect to claim 3, since Goodman discloses an unballasted fluke, the center of mass of the fluke will be located nearer to the back edge than to the tip of the fluke.

With respect to claim 6, the Office Action makes an unsupported assertion that it would have been obvious for one skilled in the art at the time of the invention to use a metal plate of constant thickness for making the fluke of Goodman, and using such a plate would have allowed one to construct flukes using standard stock material, thereby simplifying and accelerating the manufacturing in process. There is no suggestion in Goodman for using a metal plate of constant thickness (and none was made).

Thus, in view of the foregoing, the Applicant submits that Goodman fails to disclose or suggest each and every feature of claims 2-3 and 6-7. Accordingly, the Applicant requests that the rejection be withdrawn and claims 2-3 and 6-7 be allowed.

Claim 8 was rejected under 35 U.S.C. 103 as unpatentable over Goodman in view of Peabody (US 5,806,456). The Applicant respectfully traverses the rejection and submits that claim 8 recites subject matter not disclosed or suggests by Goodman and Peabody, either alone or in combination.

Regarding claim 8, the Examiner asserts that Peabody suggests the second opening. It was asserted that it would have been obvious that one skilled in the art to provide second openings in the shank of Goodman, as taught by Peabody, such that the second openings were disposed in proximity to the first opening.

Peabody shows an extra opening for attaching the rode. However, Peabody does not teach the limitation regarding the location of the second opening. It was

asserted that "there would be at least another line (from among the above-discussed infinite number of lines) that would make an angle of 45 degrees with the geometric center." See page 13 of the Office Action. However, the Office Action fails to support the suggestion for the feature and it would be pure chance to modify Goodman to achieve the limitations of claim 8 of the present invention. Therefore, this rejection is improper.

There is no second opening designed to attach the mooring line on Goodman patent. There is only an opening on the back part of the shank, for the fixation of the trip line, which is a completely different purpose.

On Peabody there are two more openings designed to move the anchor line fixation from one point to another, but the shackle used to attach the line to the anchor should, for security reasons, be strongly attached and blocked to the anchor and/or after some use, the screw of the shackle is very often blocked by sand and is, most of the time, very difficult to dismount. One skilled in the art would know that the chain is very seldom moved with the anchor of Peabody. Therefore, one skilled in the art would not have been motivated to modify Goodman with Peabody.

Thus, in view of the foregoing, the rejection of claim 8 is improper. Accordingly, the Applicant requests that the rejection be withdrawn and claim 8 be allowed.

In view of the above amendments and remarks, the Applicant submits that claims 1-3 and 5-14 are patentable over the cited prior art and the present application is in condition for allowance. The Applicant requests that a notice of allowability be issued stating as such.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event that this paper is not timely filled, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

By



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In the Drawings:

Please replace Fig. 2 with the attached replacement Fig. 2. In the figure, reference number 36 was added to make reference to a dotted line connect the center of mass with the opening 24, and 38 was added to make reference to the bottom line of the fluke.